Work Order l August-28-13 12:41			*106	3093*					•	Page 1
Item ID: D10 Revision ID: Item Name: Clar		A	Accept	*N900	<u>040</u>	100	)* s	Setup Star Stop	iA	S1* S2*
Start Date: 8/23 Required Date: 8/23 Reference:	8/13 Start Qty: 12.00 8/13 Req'd Qty: 12.00	*12* *12*		Cust Item Customer:						
Approvals: Pr	ocess Plan: MLJ	Date: 13-08-29	Tooling:	D	ate:		F	Run Star	1/1	R1*
Qe	C:	Date:	<b>SPC (Y/N):</b>	D	ate:	·		Stop	*N	R2*
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp., Stamp
Draw Nbr	Revision Nbr ·									
D1048	Rev A		·							<u> </u>
*100 *100* Waterjet FLOW CNC Waterjet 304.063	FLOW WATER JET  Memo 1-Cut as per Dwg Rev: Prog Rev: 2-Deburr if n	<u> </u>	0.00	•			_12	0		Jm.3-11-15
*110 * 110 * QC Quality Control	QC2- Inspect parts off ma  <b>Memo</b>	achine FAI/FAIB	0.00		,		_12_	0		Jm13-11-15
120  *120  *120  County Control	QC8- Inspect parts - seco	nd check	0.00 P			•	12			.•

											DQ	(A: _	Date	e:	
NCR: Y	'es	/ No	. •			WORK ORDER NON-C	ON	NFORN	ANCE / UPI	DATE		_			
											QA Close	ed:	Date	<del>:</del>	
Work Orde	r.					DISPOSITION				AGAINST DE	PARTMEI	NT/	PROCESS		
Part N	_					Rework Scrap Use-as-is		1	Skid-tube Machining Moforming	Crosstube Small Fab Finishing	1		Water Jet LEng. Coor. Packaging		Engineering Quality Other
NCR N	lo					Work Order Update							Supplier		
Root					Descri	ption of work order update	1	nitial	Act	tion	Sign &				
Cause	l	Date	Step	Qty	,	or Non-conformance	Ch	ief Eng	Desci	ription	Date		Verification		QC Inspector
Doc/Data								·		-					
Equip/Tooling								İ						-	
Operator															
Material															
Setup															
Other					Ì						Ì				
Process														-	
Supplier							İ		-						
Training															
Unapproved				_										$\bot$	
						F/	AUL	T CATE	GORY						
Landi	ng G	iear				General	_			_	-		-	_	
	Ш	Bending				Bend		Grain			Ovalized		L	_	ressure/Forced
	Centre Not Concentric to O/S BOM/Route					BOM/Route	<u> </u>	Hardwa	re		Over/Und	der t	olerance		emperature/Cure
Cracks Broken/Damaged					Broken/Damaged	L	Inspecti	on Incomplete		Part Inco	rrec	t L		/eld	
		Crushed/	Crimped			Burrs	L	Instruct	ions Incomplete/	Unclear	Part Lost,	/Mis	ssing	\^	Vrong Stock Pulled
Cuffs Contamination					Contamination		Mainte	nance	<u></u>	Part Mov	/ed				
		Heat Trea	it			Countersink		Mislabe	eled		Positione	ed W	rong _		
	Inspection Strip in Tube Cut Too Short Misread									Power Lo	ss/S	iurge	0	ther	

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence
Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Work Ord				*106	3093*							Page 2	
Item ID: Revision ID: Item Name:	D1048 Clamp	:		Accept	*N900	040	100	)*	Setup	Start Stop	*N *N	S1* S2*	
Start Date: Required Date: Reference:	8/28/13	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item Customer:								
Approvals:		s Plan:	Date:	Tooling: SPC (Y/N):		oate:			Run	Start Stop	*N *N	R1* R2*	
Sequence ID/ Work Center I 130 *120* Small Fab Small Fab	D	Operation Description  Small Fab  Memo 1-Deburr if r	equired. Break all sharp co	Set Up/ Run Hours 0.00 0.00 orners .010 / .020 as per	Tool ID	Tool#	Plan Code	Accept Qty	Rej Qty		Reject Number	Insp. Stamp  FF  13-11-2	2
140 *140* Brake NC Brake NC		NC BRAKE  Memo  Form as per	dwg D2010 using DT8053	0.00 0.00				12				FF 13-11-3	2
150 *150* QC Quality Control		QC5- Inspect part comple	eteness to step on W/O	0.00 DAS 27 0.00 \$39	/2/			12					

NCR: Y	⁄es	/ No				<b>WORK ORDER NON-</b>	-CO	NFORM	<b>JANCE / UP</b>	DATE			
											QA Closed:	Date:	
Work Orde	er: _					DISPOSITION	_			AGAINST DI	EPARTMENT,	/PROCESS	
Part N	-					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining Moforming Marge Fab	Crosstube Small Fab Finishing Composite	<b>-1</b>	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty	,	or Non-conformance	C	hief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling													
Operator													
Material												1	
Setup													
Other				į									
Process													
Supplier				1									
Training													
Unapproved											<u> </u>		
							FAU	LT CATE	GORY				
Landi	ng G	ear			_	General	_	_		_	-		7
	-	Bending				Bend	L	Grain		·  _	Ovalized	ļ	Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route	$\perp$	Hardwa			Over/Under	<del></del>	Temperature/Cure
	$\vdash$	Cracks			_	Broken/Damaged	L	-1	ion Incomplete	<u></u>	Part Incorre	<u> </u>	Weld
	-	Crushed/	'Crimped		<u> </u>	Burrs	L		ions Incomplete/U	Jnclear	Part Lost/M	issing	Wrong Stock Pulled
	-	Cuffs				Contamination	L	Mainte		<u></u>	Part Moved		
	$\vdash$	Heat Trea				Countersink	L	Mislabe		<u> </u>	Positioned V		1
	$\vdash$	Inspectio		Tube	<u> </u>	Cut Too Short	L	Misread	t	L	Power Loss/	Surge	Other
	Ш	Ripples in	n Bend		L	Drill Holes		Offset					
		Torque V	Vaves in I	Extrusio	n I	Drawing		Out of (	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Turning Sequence

Wave/Twist in Tube

Finish

Work Order ID August-28-13 12:41:59 P			*1060	193*							Page 3
Item ID: D1048 Revision ID: Item Name: Clamp			Accept	*N900	040 <i>°</i>	100	*	Setup	Start Stop	*N:	S1* S2*
Start Date: 8/28/13 Required Date: 8/28/13 Reference:	Start Qty: 12.00 Req'd Qty: 12.00	*12* *12*		Cust Item I Customer:	D:						
•	Plan:	Date:	Tooling:		nte: nte:			Run	Start Stop		R1* R2*
Sequence ID/ Work Center ID  160 *160* Powder Coating  170 *170* QC Quality Control	OVEN TEM	E: 10:35 200	Set Up/ Run Hours 0.00 0.00 DAS 27 9-89	Tool ID			Accept Qty	Qt	<b>y</b> 1	Reject Number	Insp. Stamp

0.00

0.00

 $12 \times 048/3 - 11 - 22$ 28
9-89

Identify as per dwg & Stock Location: 6A

Memo

180

\*180\* Packaging

Packaging

												DQA:	D	ate:	
NCR: Y	'es	/ No				WORK ORDER NON-	COI	NFORM	/ANCE / UP	DATE					
									-		QA CI	osed:	D	ate:	
Work Orde	or.					DISPOSITION				AGAINST DE	PARTI	MENT	/PROCESS		
Work Orde						Rework	7		Skid-tube	Crosstube	1		Water Je	t∏	Engineering
Part N	lo.					Scrap	1		Machining	Small Fab	İ	Pro	d. Eng. Coor		Quality
	•					Use-as-is	1	Therm	noforming	Finishing	Re	c/Sto	re/Packagin	g	Other
NCR N	No.					Work Order Update	]		Large Fab	Composite	]		Supplie	r	
Root	Ī				Descri	ption of work order update		Initial	Ad	ction	Sigi	ո &			
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	cription	Da	ite	Verificati	on	QC Inspector
Doc/Data	Щ		1												
Equip/Tooling	$\Box$							:							
Operator	$\dashv$														
Material	Ш														
Setup	$\square$						1								
Other	-														
Process	$\Box$						Ì	:							
Supplier	$\vdash$														
Training Unapproved	$\vdash$														
опарргочец	1		<u> </u>	<u> </u>		F	AUI	LT CATE	GORY		1		1		
Landi	ng (	ear				General									
		Bending				Bend	$\Gamma$	Grain			Ovaliz	ed			Pressure/Forced
		Centre N	ot Conce	ntric to	o/s	BOM/Route		Hardwa	re		Over/	Under	tolerance		Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on incomplete		Part I	ncorre	ct		Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete,	/Unclear	Part L	ost/M	issing		Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part N	/loved			
		Heat Tre	at			Countersink		Mislabe	led		Positi	oned \	<b>V</b> rong		<u>.</u>
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	i		Powe	r Loss/	/Surge		Other
1		Rinnles i	n Rend			Drill Holes		Offcet		<del></del>					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Work Ord	-			*106	3093*							Page	: 4
Item ID: Revision ID: Item Name:	D1048 Clamp			Accept	*N900	<b>040</b>	100	)* s	Setup	Start Stop	1 74	S1* S2*	1
Start Date: Required Date Reference:	8/28/13 e: 8/28/13		*12* *12*		Cust Item I Customer:	D:							
Approvals:	Proces QC: _	ss Plan:	Date:	Tooling: SPC (Y/N):		ate:		F	₹un	Start Stop	*N *N	R1* R2*	
Sequence ID/ Work Center 190 *1 90* QC Quality Control	ID	Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accept Qty	Rej Qt	-	Reject Number	Insp. Stamp	7

pl/3-11-25

NCR:	Yes	/ No				<b>WORK ORDER NON-C</b>	100	<b>NFORM</b>	//ANCE / UPD	ATE			
<u>.</u>											QA Closed:	Date	:
Work Orde	eŕ.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I	No.					Rework Scrap Use-as-is		Therm	Skid-tube Machining noforming	Crosstube Small Fab Finishing	4	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR I	NO.					Work Order Update	J		Large Fab	Composite	J	Supplier	
Root					Descri	ption of work order update		Initial	Acti	on	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	nief Eng	Descri	ption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved									•				
						F	AUL	LT CATE	GORY				
Landi	ing (	Gear Bending				<b>General</b> Bend		Grain			Ovalized	Г	Pressure/Forced
	<b>-</b>	Centre N	ot Conce	ntric to (	o/s  -	BOM/Route	$\vdash$	Hardwa	re	<u> </u>	Over/Under	tolerance	Temperature/Cure
	H	Cracks	000000		,,	Broken/Damaged	<b> </b>	4	on Incomplete	-	Part Incorre	<b>⊢</b>	Weld
		Crushed/	Crimped			Burrs		Instruct	ions Incomplete/U	nclear	Part Lost/M	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		- <del></del>
		Heat Trea	at			Countersink		Mislabe	led		Positioned V	Vrong	
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	i		Power Loss/	Surge	Other
1		Rinnles in	n Bend			Drill Holes		Offset				_	

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

**Picklist Print** 

August-28-13 12:41:59 PM

Work Order ID:

106093

Parent Item:

D1048

Parent Item Name:

Clamp

**Start Date: 8/28/13** 

Required Date: 8/28/13

Page 1

**Start Qty: 12.00** 

Required Qty: 12.00

Comments:

IPP: B02.02.22Re-formatNG

IPP Rev:C Now on Waterjet 06-12-06 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA 304/316 Sheet .063		Purchased	No			100	sf	246.8822	0.018	_0. <del>227368</del> 8 ⊙. ≤		Jm.	13-11-15
				Location		Loc Oty	<u>Lo</u>	c Code					
				MAT020		246.8821686							
				1222	245	0.1713688							
				1231	36	140.8							ī
				1244	128	23.61							
				1255	599	5.410631							
				M12	6159	76.8901688			126	915			

											DQA:	Date:	
NCR: Y	es /	/ No				WORK ORDER NON-C	ON	FORN	AANCE / UP				
										-	QA Closed:	Date:	
Work Orde	or.					DISPOSITION	1			AGAINST DE	PARTMENT	/PROCESS	
WOIK Orde	_					Rework			Skid-tube	Crosstube		Water Jet	Engineering
Part N	lo					Scrap	11	ľ	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is		Therm	oforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	اo		···-			Work Order Update	<b>!</b>		Large Fab	Composite		Supplier	
											c: 0		1
Root						ption of work order update		itial		tion	Sign &	V Garage	061
Cause		Date	Step	Qty	(	or Non-conformance	Chie	ef Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data	$\Box$						1	ļ					
Equip/Tooling													
Operator	Щ												
Material	Н						ļ						
Setup	$\dashv$		!				1						
Other	_						1				l 		
Process	$\vdash$						ĺ						
Supplier _	Н												
Training	Н												
Unapproved				l	<u> </u>	F-1	<u> </u>	CATE	CORV		<u> </u>	l	
Landi			· · · · · · · · ·			General	AULI	CATE	JORT		······		
Langu		Bending				Bend	$\Box$	Grain		<u> </u>	Ovalized		Pressure/Forced
	$\boldsymbol{\vdash}$	Centre No	ot Conce	ntric to		BOM/Route	$\mathbf{H}$	Hardwa	ro	<u> </u>	Over/Under	tolerance	Temperature/Cure
	—	Cracks	or conce	incite to	°′3	Broken/Damaged	$\mathbf{H}$		on Incomplete	<u> </u>	Part Incorre		Weld
,	-	Crushed/0	rimned		<b>-</b>	Burrs			ions Incomplete/	Unclear —	Part Lost/M	<del></del>	Wrong Stock Pulled
	$\vdash$	Cuffs	cimpeu		<u> </u>	Contamination	$\vdash$	Mainte	•		Part Moved		Tarroug Stock Laurea
	$\vdash$	leat Trea	t		-	Countersink		Mislabe		<b> </b>	Positioned V	Vrong	
	Н	nspection		Tube	-	Cut Too Short	$\mathbf{H}$	Misreac		-	Power Loss/		Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

DART AEROSPACE LTD	Work Order:	106093
		<u> </u>
Description: Clamp	Part Number:	D1048
Inspection Dwg: D1048 Rev: A	,	Page 1 of 1

	FIR	ST ARTICLE	INSPEC.	LION CH	ECKLIST		
		X First Ar	ticle	Prof	totype		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection		mments
0.750	+/-0.010	0.756"	_		U	Thmo	<u>, 1</u>
2.125	+/-0.010	2.127	-		U		
1.705	+/-0.010	1-709"	_		V		·
0.375	+/-0.010	0379"	_		V		·
Ø0.203	+0.005 x -0.001	0.204"			~		
			DAS				
Measured by	y:	Audited by	. <u>27</u> : 9-89		Prototype	Approval:	N/A
Date	$+\sqrt{\cdot}$	Date	<del></del>	15		Date:	N/A
Rev Date						Revised by	Approved

Rev	Date	Change	Revised, ty	Approved
Α	09.04.30	New Issue	KJ/DD 🛂	M
·	·			

RELEASE 197/09/02 863

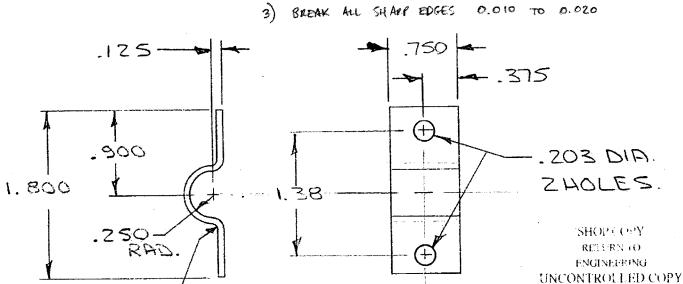
NOTES:

1) MOTERIAL

STAINLESS STEEL T304 #ZB .062 THICK

2) FINISH : POWDER COAT BLACK SANDTEX (REF. 4.3.5.7)

PER DART QSI 005 4.3



.063 RAB

(TYP)

2.125 1.705 FLAT PATTERN

SUBJECT TO AMENDMENT

WITHOUT NOTICE WORK ORDER W1 106093 MLJ

13-08-29



			-		1		REVET CODE SHAL	L BE PER NAS 623	PART NO.	ITEM	DES	CRIPTION	l	MATERIAL	SPECTVENCON	J
	; ;	[	RF	REVISION DRAWN	BIES DEMANNE IS PROVATE AND CONFIDENTIAL AN IS IS NOT TO BE USED FOR ANY PURPOSE OR CO WITHOUT THE PERMASSION OF DART AERO.	BASIC CODE	DAL DASH NO. NOTICEAD HEAR SIDE FOREAD HAR SIDE	DANGE DATE			DART		DART AERO ACCESSORIES IN		1	
	14. gr	1	14	APPROVED									DATE	VAIVCOOVEN		1
5			- 1.5		RECLIREMENTS - UNLE	SS OTHERWISE SPECIFIED	D-DMPLE DIGIT-NO OF SHEETS	LENGTH CASH NO.	BRANKET		434					1
*	-	1	8		GENERAL	(set)	C*COUNTERSER	1 44-340144777	DESIGN	1-30-	1911		-			1
			55 7 PATE	DESCRIPTION OF	E. DIMERSIONS ARE IN PICHES 2. SURFCE ROUGHESS 1774 3. REMOVE SHAPP EDICES 015 MAX. 6. IMPRAISE FROM ML - 5 - 2742	1. FOLERANCES — JOX 2.030 NOC 2.010 2. ANGLES 2 50 2. PARALLEUSM 1.0025 4. ECCENTRICITY .005 MAIK.	BASIC BJ=M520470AD BG=M520426AD	CODES	BRACH F.	<u> </u>	1 '	nn.s		MP	REV	
			CHANCE	E HOLES PER AND 10387	S SYMMETRY ABOUT ALL MAC CENTRE LINES.005  ALL DISCREPANCIES — DO NO	OT SCALE		CUENT			CODE	ecvri	)   O 4	18 A		
<b>3</b>			1 4		I mer om	PACE DIVONING			<b>*</b>		2				1	